What is claimed is:

1. Apparatus comprising an elongate structure, said structure including:

a hose having a main section and two cuffed end sections, said main section being convoluted or corrugated;

a pair of headers each plugging a said cuffed end section; and

a pair of joints each attached to a said header.

2. Apparatus as defined in claim 1, wherein said cuffed end sections are smooth, and wherein said joints are flexible.

3. Apparatus as defined in claim 2, wherein:

said structure further includes an elongate strength member inside said hose;

said strength member connects a pair of said headers;

said strength member is at least substantially characterized by a braided configuration so as to be adaptable to the disposition therethrough of plural fasteners;

NONPROVISIONAL PATENT APPLICATION Navy Case No. 84,633 Keith E. Sommer and Henry P. Stottmeister

Non-Kinking Oil-Filled Acoustic Sensor Stave

each said fastener is for fastening an acoustic device with respect to said

strength member;

said apparatus is adaptable to association with a plurality of said acoustic

devices so as to permit the alignment of said objects inside said structure; and

said structure is adaptable to containment of an acoustically suitable

fluid so that said acoustically suitable fluid is sealed inside said structure and

so that ambient fluid is sealed outside said structure.

4. Apparatus as defined in claim 1, wherein said structure further

includes an elongate strength member inside said hose, said strength member

connecting a pair of said headers, said strength member being at least

substantially characterized by a braided configuration so as to be adaptable to

the disposition therethrough of plural fasteners each being for fastening an

object with respect to said strength member, said apparatus thereby being

adaptable to association with a plurality of said objects so as to permit the

alignment of said objects inside said structure.

5. Apparatus as defined in claim 4, wherein said objects are acoustic

devices, and wherein said structure is adaptable to containment of an

acoustically suitable fluid so that said acoustically suitable fluid is sealed inside

Page 25 of 34

said structure and so that ambient fluid is sealed outside said structure.

6. Apparatus as defined in claim 5, wherein

said apparatus comprises a plurality of said structures;

said apparatus is adaptable to association with said objects so as to permit the arrayal of said objects inside said structures;

said apparatus further comprises a pair of frames;

said structures are interposed between said frames;

said main section of said hose has a non-kinking quality;

each said joint has a flexible quality;

said apparatus has a pliable quality associated with said non-kinking quality and said flexible quality.

- 7. The apparatus as defined in claim 6, wherein said pliable quality facilitates storage of said apparatus.
- 8. A device comprising a hose, two headers and two connective lines, said hose including a longitudinally intermediate portion and two

NONPROVISIONAL PATENT APPLICATION Navy Case No. 84,633 Keith E. Sommer and Henry P. Stottmeister

Non-Kinking Oil-Filled Acoustic Sensor Stave

longitudinally extreme portions, said intermediate portion of said hose being at

least substantially characterized by an uneven kinking-preventative shape

selected from the group consisting of convoluted and corrugated, said extreme

portions of said hose each being at least substantially characterized by an even

connection-facilitative shape, each said connective line being at least

substantially characterized by flexibility, each said header fitting inside a said

extreme portion of said hose, said structure being adaptable to combination

with two bodies wherein each said connective line connects a said header with

a said body.

9. The device defined in claim 8 wherein said device further comprises

an elongate strength member inside said hose, said elongate strength member

connecting said headers, said elongate strength member being at least

substantially characterized by a braided configuration so as to be adaptable to

the disposition therethrough of plural fasteners, each said fastener being for

fastening an object with respect to said elongate strength member.

10. The device defined in claim 9 wherein said objects are acoustically

sensitive, and wherein said device is adaptable to use in an environmental

aqueous fluid and to containment of an acoustically suitable fluid so that said

headers:

Page 27 of 34

NONPROVISIONAL PATENT APPLICATION
Navy Case No. 84,633

Keith E. Sommer and Henry P. Stottmeister Non-Kinking Oil-Filled Acoustic Sensor Stave

at least substantially seal said environmental aqueous fluid outside said

device; and

at least substantially seal said acoustically suitable fluid inside said

device.

11. The device defined in claim 10 wherein, when said device is

combined with said bodies, said combination has a pliant character associated

with said uneven kinking-preventative shape of said hose and said flexibility of

said connective lines.

12. The device defined in claim 11 wherein said device further comprises

electrical conduction means inside said hose, the inoperability of said electrical

conduction means being mitigated by said uneven kinking-preventative shape

of said hose.

13. Acoustic apparatus suitable for underwater use, said acoustic

apparatus comprising:

a tube generally characterized by a geometric longitudinal tubular axis;

plural hydrophonic devices each generally characterized by a geometric

Page 28 of 34

NONPROVISIONAL PATENT APPLICATION
Navy Case No. 84,633

Keith E. Sommer and Henry P. Stottmeister Non-Kinking Oil-Filled Acoustic Sensor Stave

longitudinal hydrophone axis, each said hydrophonic device having an axial

bore and a diametric bore wherein said axial bore is disposed generally along

said hydrophonic axis and said diametric bore is disposed generally

perpendicular to said hydrophonic axis;

a line generally characterized by a geometric longitudinal linear axis that

is approximately coincident with said tubular axis, said line having an at least

substantially braided configuration; and

plural pins;

wherein said hydrophonic devices, said line and said pins are situated

inside said tube, said line passing through said axial bores of said hydrophonic

devices, said hydrophonic devices being approximately aligned with each other

so that the corresponding said hydrophonic axes are approximately coincident

with said tubular axis, said pins each being associated with said line and a said

hydrophonic device so that said hydrophonic devices are each fastened with

respect to said line, each said pin passing through said line and through said

diametric bore of the corresponding said hydrophonic device.

14. The acoustic apparatus according to claim 13, wherein:

said tube is characterized by a tubular length and two tubular ends;

said tube is smooth in two end portions of said length, said end portions

Page 29 of 34

being proximate said two tubular ends; and

said tube has generally circumferential folds in a medial portion of said length, said medial portion being between said two end portions; and said circumferential folds are one of corrugations and convolutions.

- 15. The acoustic apparatus according to claim 13, wherein said line includes plural strands that are generally adaptable to sufficient separation with respect to each other for permitting each said pin to pass through said line.
- 16. The acoustic apparatus according to claim 13, wherein said hydrophonic devices:

are approximately equally spaced apart from each other; each generally describe a cylindrical shape; and each include sensory means and preamplification means.

17. The acoustic apparatus according to claim 13, wherein: said acoustic apparatus further comprises two headers;

said tube has two tubular ends;

said line has two linear ends;

each said header engages said tube at a said tubular end; and

said headers hold said line at said two linear ends.

18. The acoustic apparatus according to claim 17, wherein said tube

contains oil, and wherein said headers seal said tube so as to prevent egress of

oil and ingress of water with respect to said tube.

19. The acoustic apparatus according to claim 18, wherein said acoustic

apparatus further comprises plural electrically conductive wires adaptable to

electrical connection with a telemetric receiving station, and wherein at least

one said header is provided with at least one hole for permitting at least some

said wires to pass through said header for effecting said electrical connection.

20. The acoustic apparatus according to claim 19, wherein:

said tube is characterized by a tubular length and two tubular ends;

said tube is smooth in two end portions of said length, said end portions

being proximate said two tubular ends; and

Page 31 of 34

said tube has generally circumferential folds in a medial portion of said length, said medial portion being between said two end portions; and said circumferential folds are one of corrugations and convolutions.

21. The acoustic apparatus according to claim 20, wherein said acoustic apparatus further comprises an interior sleeve, and wherein said interior sleeve:

is generally characterized by a geometric longitudinal interior sleeve axis that is approximately coincident with said tubular axis;

has an at least substantially mesh configuration; and

is situated inside said tube and outside said hydrophonic devices, said line and said pins.

22. The acoustic apparatus according to claim 21, wherein said acoustic apparatus further comprises a fairing combination, and wherein:

said fairing combination includes an exterior sleeve and plural ribbons;

said ribbons are arranged outside said exterior sleeve for imparting a selected hydrodynamic character to said acoustic apparatus;

said exterior sleeve is generally characterized by a geometric longitudinal

exterior sleeve axis that is approximately coincident with said tubular axis;

said exterior structure has an at least substantially mesh configuration; and

said fairing combination is situated outside said tube.